



ELSEVIER

Coordination Chemistry Reviews 171, Complete,
April 1998

COORDINATION
CHEMISTRY
REVIEWS

Contents

Foreword	1
Photochemistry and photophysics of coordination compounds: An extended view V. Balzani, A. Credi and M. Venturi	3
Design of luminescent polynuclear copper(I) and silver(I) complexes with chalcogenides and acetylides as the bridging ligands V.W.-W. Yam, K.K.-W. Lo, W.K.-M. Fung and C.-R. Wang	17
The photophysical behavior of d_6 complexes having nearly isoenergetic MLCT and ligand localized excited states A.I. Baba, J.R. Shaw, J.A. Simon, R.P. Thummel and R.H. Schmehl	43
Photocatalytic reactions of porphyrin-based multielectron transfer sensitizers G. Knör	61
Excited state acid-base chemistry. A new quenching mechanism C. Hicks, J. Fan, I. Rutenberg and H.D. Gafney	71
Luminescent excimers and exciplexes of Pt^{II} compounds C.N. Pettijohn, E.B. Jochowitz, B. Chuong, J.K. Nagle and A. Vogler	85
Excited states of metal-metal bonded diimine complexes vary from extremely long lived to very reactive with formation of radicals or zwitterions D.J. Stufkens, M.P. Aarnts, J. Nijhoff, B.D. Rossenaar and A. Vlček Jr.	93
Photochemical reactions of palladium(0) and platinum(0) phosphine complexes T. Tsubomura and K. Sakai	107
Lanthanide-ion modified cyclodextrin supramolecules C.M. Rudzinski, W.K. Hartmann and D.G. Nocera	115
Luminescent platinum complexes: tuning and using the excited state W. Paw, S.D. Cummings, M.A. Mansour, W.B. Connick, D.K. Geiger and R. Eisenberg	125
Glowing gold rings: solvoluminescence from planar trigold(I) complexes E.Y. Fung, M.M. Olmstead, J.C. Vickery and A.L. Balch	151
Metal chelates as emitting materials for organic electroluminescence C.H. Chen and J. Shi	161
The relationship between the local structure of copper(I) ions on $Cu^+/zeolite$ catalysts and their photocatalytic reactivities for the decomposition of NO_x into N_2 and O_2 at 275 K M. Anpo, M. Matsuoka, K. Hanou, H. Mishima, H. Yamashita and H.H. Patterson	175
Photochemistry of metal nitrosyl complexes. Delivery of nitric oxide to biological targets P.C. Ford, J. Bourassa, K. Miranda, B. Lee, I. Lorkovic, S. Boggs, S. Kudo and L. Laverman	185
Light and metal complexes in medicine G. Stochel, A. Wanat, E. Kuliš and Z. Stasicka	203
Luminescent transition-metal-containing cyclophanes ("molecular squares"): covalent self- assembly, host-guest studies and preliminary nanoporous materials applications R.V. Slone, K.D. Benkstein, S. Bélanger, J.T. Hupp, I.A. Guzei and A.L. Rheingold	221
Molecular photovoltaics J.E. Moser, P. Bonnôte and M. Grätzel	245
Mechanisms of photoluminescent quenching of oxidized porous silicon. Applications to chemical sensing M.T. Kelly and A.B. Bocarsly	251

Photoinduced electron transfer in supramolecular assemblies of transition metal complexes I. Willner, E. Kaganer, E. Joselevich, H. Dürr, E. David, M.J. Günter and M.R. Johnston	261
Photophysics of metal-organic π -conjugated polymers K.D. Ley and K.S. Schanze	287
Electron and energy transfer from Cu ^I MLCT excited states M. Ruthkosky, C.A. Kelly, F.N. Castellano and G.J. Meyer	309
Time-resolved spectroscopic studies of the influence of the electronic environment on the charge-transfer excited states of mono- and di-nuclear Ru(II) complexes C.G. Coates, T.E. Keyes, J.J. McGarvey, H.P. Hughes, J.G. Vos and P.M. Jayaweera	323
Building photoactive molecular-scale wires A. Harriman and R. Ziessel	331
Electron and hydrogen transfer reactions of nucleotides: from Stern-Volmer quenching to nucleoprotein structure J. Kim, M.F. Sistare, P.J. Carter and H.H. Thorp	341
Photoproperties of the polymeric {[M(dmb) ₂]Y} _n materials: photoinduced intrachain energy and intermolecular electron transfers, and design of photovoltaic cells P.D. Harvey and D. Fortin	351
Non-radiative processes of excited CT states of Ru(II) and Pt(II) compounds and excited d-d states of Rh(III) compounds in the solid state and at higher temperatures A. Islam, N. Ikeda, K. Nozaki, Y. Okamoto, B. Gholamkhass, A. Yoshimura and T. Ohno	355
Toward transparent molecular wires: electron and energy transfer in transition metal derivatized conducting polymers B. Jiang, S.W. Yang, S.L. Bailey, L.G. Hermans, R.A. Niver, M.A. Bolcar and W.E. Jones Jr. . . .	365
Emitting state energies and vibronic structure in the luminescence spectra of <i>trans</i> -dioxorhenium(V) complexes C. Savoie and C. Reber	387
A new type of MLCT transition relevant to oxidative additions: d \rightarrow σ^* excitation A. Vogler and H. Kunkely	399
Assignment of the triplet manifolds of d ⁸ complexes and linear chains via the effects of temperature and magnetic fields on the phosphorescence lifetimes G.A. Crosby and K.R. Kendrick	407
Organometallic "super reducing agents". Electron transfer chemistry of photogenerated 19e ⁻ W(CO) ₅ (L) ⁻ radicals I.S. Zavarine and C.P. Kubiak	419
Metal-to-ligand charge-transfer photochemistry: quantum chemistry and dynamics of the systems RM(CO) ³ (DAB) (M = Mn; R = H, methyl, ethyl; M = Re, R = H, DAB = 1,4-diaza-1,3-butadiene) D. Guillaumont, K. Finger, M.R. Hachey and C. Daniel	439
Strategies for enhancing photoluminescence of Nd ³⁺ in liquid media S. Yanagida, Y. Hasegawa, K. Murakoshi, Y. Wada, N. Nakashima and T. Yamanaka	461
Assemblies of luminescent ruthenium(II)- and osmium(II)-polypyridyl complexes based on hydrogen bonding M.D. Ward, C.M. White, F. Barigelletti, N. Armaroli, G. Calogero and L. Flamigni	481
Author Index	489
Subject Index	491

The table of contents of *Coordination Chemistry Reviews* is included in ESTOC – Elsevier Science Tables of Contents service – which can be accessed on the World Wide Web at the following URLs:
<http://www.elsevier.nl/locate/estoc> or <http://www.elsevier.com/locate/estoc>

